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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of
BUNKER

Atty. Ref.: 839-1333

Serial No. 10/065,495

Group: 3746

Filed: October 24, 2002

Examiner: Unknown

For: COMBUSTOR LINER WITH INVERTED TURBULATORS

* * * * *

July 24, 2003

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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TECHNOLOGY CENTER R3700

Sir:

INFORMATION DISCLOSURE STATEMENT

As suggested by 37 C.F.R. 1.97, the undersigned attorney brings to the attention of the Patent and Trademark Office the references listed on the attached form PTO-1449, a copy of each of which is enclosed. This is not to be construed as a representation that a search has been made or that no better prior art exists, or that a reference is relevant merely because cited.

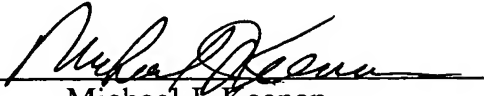
Please note that the reference entitled "Corporate Research and Development Technical Report, Section 3" may have proprietary information belonging to the assignee and, therefore, applicant reserves the right to file a Petition to expunge this reference from the record when prosecution has been completed.

The Examiner is requested to initial the attached form PTO-1449 and to return a copy of the initialed document to the undersigned as an indication that the attached references have been considered and made of record.

BUNKER
Serial No. 10/065,495

Respectfully submitted,

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INFORMATION DISCLOSURE
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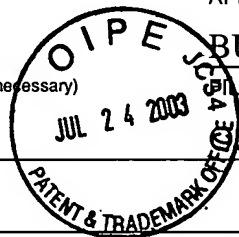
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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	1,848,375	3/1932	Muir			
	2,801,073	7/1957	Savage			
	2,938,333	5/1960	Wetzler			
	3,229,763	1/1966	Rosenblad			
	3,572,031	3/1971	Szetela			
	3,664,928	5/1972	Roberts			
	3,899,882	8/1975	Parker			
	4,158,949	6/1979	Reider			
	4,184,326	1/1980	Pane, Jr. et al.			
	4,838,031	6/1989	Cramer			
	5,024,058	6/1991	Shekleton et al.			
	5,353,865	10/1994	Adiutori et al.			

FOREIGN PATENT DOCUMENTS

DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
JP 2001-164901	6/2001	Japan			x
61-280390	12/1986	Japan			
9-217994	8/1997	Japan			
JP-408110012-A	4/1996	Japan			

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

	"Corporate Research and Development Technical Report Abstract Page and Sections 1-2," Bunker et al., October 2001.
	"Corporate Research and Development Technical Report Section 3," Bunker et al., October 2001.
	"Thermohydraulics of Flow Over Isolated Depressions (Pits, Grooves) in a Smooth Wall," Afanas'yev et al., Heat Transfer Research, Vol. 25, No. 1, 1993.
	Mass/Heat Transfer in Rotating Dimpled Turbine-Blade Coolant Passages," Charya et al., Louisiana St. University, 2000.
	"Effect of Surface Curvature on Heat Transfer and Hydrodynamics within a Single Hemispherical Dimple," Proceedings of ASME TURBOEXPO 2000, May 8-11, 2000, Munich Germany.
	"Concavity Enhanced Heat Transfer in an Internal Cooling Passage," Chyu et al., presented at the International Gas Turbine & Aeroengine Congress & Exhibition, Orlando, Florida, June 2-5, 1997.
	"Heat Transfer Augmentation Using Surfaces Formed by a System of Spherical Cavities," Belen'kiy et al., Heat Transfer Research, Vol. 25, No. 2, 1993.
	"Experimental Study of the Thermal and Hydraulic Characteristics of Heat-Transfer Surfaces Formed by Spherical Cavities," Institute of High Temperatures, Academy of Sciences of the USSR. Original article submitted November 28, 1990.
	"Turbulent Flow Friction and Heat Transfer Characteristics for Spherical Cavities on a Flat Plate," Afanasyev et al., Experimental Thermal and Fluid Science, 1993.
	"Convective Heat Transfer in Turbulized Flow Past a Hemispherical Cavity," Heat Transfer Research, Vol. 25, Nos. 2, 1993.

*Examiner

Date Considered

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Atty. Docket N .

Serial No.

INFORMATION DISCLOSURE
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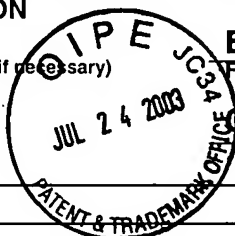
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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,361,828	11/1994	Lee et al.			
	5,363,654	11/1994	Lee			
	5,419,039	5/1995	Auxier et al.			
	5,421,158	6/1995	Stenger et al.			
	5,460,002	10/1995	Correa			
	5,651,662	7/1997	Lee et al.			
	5,660,525	8/1997	Lee et al.			
	5,681,144	10/1997	Spring et al.			
	5,695,321	12/1997	Kercher			
	5,724,816	3/1998	Ritter et al.			
	5,738,493	4/1998	Lee et al.			
	5,758,503	6/1998	Dubell et al.			
	5,797,726	8/1998	Lee			
	5,822,853	10/1998	Ritter et al.			
	5,933,699	8/1999	Ritter et al.			
	5,975,850	11/1999	Abuaf et al.			
	6,098,397	8/2000	Glezer et al.			
	6,134,877	10/2000	Alkabie			
	6,190,120	2/2001	Thatcher et al.			
	6,237,344	5/2001	Lee			
	6,314,716	11/2001	Abreu et al.			
	Pub # 2001/005241 A1	12/2001	Pantow et al.			
	6,334,310	1/2002	Sutcu et al.			
	6,402,464	6/2002	Chiu et al.			
	6,408,629	6/2002	Harris et al.			
	6,412,268	7/2002	Cromer et al.			
	6,468,669	10/2002	Hasz et al.			
	6,494,044	12/2002	Bland			
	6,504,274	1/2003	Bunker et al.			
	6,526,756	3/2003	Johnson et al.			

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

/	Patent Application Serial No. 10/010,549, filed November 8, 2001.
-	Patent Application Serial No. 10/063,467, filed April 25, 2002.
.	Patent Application Serial No. 10/162,755, filed June 6, 2002.
✓	Patent Application Serial No. 10/162,766, filed June 6, 2002.
✓	Patent Application Serial No. 10/064,605, filed July 30, 2002.
✓	Patent Application Serial No. 10/065,108, filed September 18, 2002.
✓	Patent Application Serial No. 10/065,115, filed September 18, 2002.
✓	Patent Application Serial No. 10/065,814, filed November 22, 2002.
✓	Patent Application Serial No. 10/301,672, filed November 22, 2002.

*Examiner		Date Considered	
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